Outbreak due to trichinellosis: rapid and concerted public health action limits infection through early post-exposure prophylaxis, Germany, 2013.

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Background: Food safety authorities discovered that *Trichinella*-infested meat with approximately 10 larvae/g had entered the food chain in Germany in March 2013. Mobile vendors sold ≥300 raw wild boar sausages and prime cut meat. Public health authorities issued guidelines for health professionals including post-exposure prophylaxis (PEP) by mebendazole and advised the public to seek medical advice if exposed. We examined the timing and effectiveness of PEP in this outbreak.

Methods: Until December 2013, we followed all exposed persons who reported to local public health offices and obtained information on boar consumption, symptoms, medication. Serum samples were tested by an in-house *Trichinella*-specific ELISA. We defined cases as persons presenting with myalgia and/or periorbital swelling since boar exposure in March/April 2013 and *Trichinella*-specific IgM and IgG antibodies. We compared PEP failure in early versus late PEP recipients. Relative risks (RR) and 95% confidence intervals (CI) were calculated using exact Poisson regression.

Results: Of 105 exposed persons interviewed, 82 were tested. Antibodies were detected in 21/82 (26%) participants, 14/21 (67%) met the case definition. Mebendazole was taken by 48 persons; 21 (44%) started within 0-4 days, 16 (33%) within 5-14 days and 11 (23%) >14 days. Cases were more likely to occur among those who started PEP within 5-14 days (5/16, 31%), compared to those who started within 0-4 days (0/21, 0%); (RR=8.83, 95%CI 1.20-∞).

Conclusion: Concerted efforts by food safety and public health authorities lead to timely outbreak control and facilitated the provision of early PEP. PEP appears to be more effective in preventing infection when given early, preferably within 4 days. We therefore recommend initiating PEP without delay in similar settings and encourage public health professionals to fast-track this intervention.

Keywords: trichinellosis, food-borne disease, zoonosis, post-exposure prophylaxis.

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